

APPEAL FOR Museum Education

*Written and Published
by*

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BOOKS ON MUSEUM EDUCATION

Rs. A.

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| 1. Hints on Museum Education | 306 pages | 1 | 0 |
| 2. Education through Museum | 68 do. | 0 | 4 |
| 3. Necessity of Museum Education | 72 do. | 0 | 4 |
| 4. Appeal for Museum Education | 50 do. | 0 | 4 |
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AN APPEAL

Attention of the authorities of all the Universities of India is invited towards this subject of vital importance with a passionate appeal for starting Educational Museums in every University and its affiliated Colleges and Schools.

APPEAL FOR Museum Education

CHAPTER I

Introductory Notes

AFTER a fair trial for a period extending over a century the English system of public instruction as followed in India today has been found defective in several respects. It is becoming increasingly far too costly; it is too bookish and is inadequate to awaken general intelligence and capacity to apply it to practical use; and, above all, it is hardly fit for purposes of mass education. The consequence is that the present illiteracy of 95 per cent. hardly seems likely to be reduced to 50 per cent. even by the end of the next century. Our country is so backward, that almost all advanced countries show 95 as their percentage of literacy, as against our 95 per cent. illiterate. Our Government is spending only 6 per cent of its total revenue on education; so that with this meagre grant it may take another century to raise the percentage of literacy from 5 to even 20 per cent. It is, however, a matter of gratification that this deplorable state of

things is being increasingly appreciated and Provincial Governments are vying with one another in introducing free and compulsory primary education. But, the process cannot but be slow for financial reasons. While book-education, free and compulsory, will come in its own time as funds become available, great deal can be done, to awaken general intelligence of boys and girls, as well as, of illiterate adults by starting and using well-planned museums for educational purpose.

2. I have discussed my scheme of educational museums in full detail in the following books, published by me in the course of the last 5 years, and would invite to it the kind attention of those in control of educational policy. The scheme is capable of being worked out at a comparatively small cost.

(1) Educational Museums at the Educational Centres of India (65 pages, price 6 annas; it is for the present out of stock).

(2) Education through Museum (96 pages, price 6 annas, postage -/1/3, out of stock).

(3) Hints on Museum Education (306 pages, price Rupee one, postage /3/9).

(4) Education by Museum (being Chap. III of my book "Educational Reformation in India" (pages 280, price Rupee one, postage /3/3).

3. The books can be obtained from me. The books are complementary to one another in so far as dissemination of knowledge through museum is concerned.

4. An Educational Museum should be so organised that it contains exhibits suitable and adequate for the needs of both students and general public. The collection should embrace, as far as possible, all such subjects as are needed to equip visitors with general

knowledge of practical importance. An idea of such subjects can be obtained from the "*Classification of Exhibits*" printed in this pamphlet. The exhibits in such a museum may of course be represented in the form of originals, models or pictures, as may be convenient. So far no attempt appears to have been made in our country to employ museums as a vehicle for imparting general knowledge with the result, that while England, with a population of about $\frac{1}{4}$ th of that of India, is at present possessing about 400 museums, India can boast of only 105, half of which are antiquarian and one-fourth of which are college-museums. In the advanced countries millions of people are receiving their education by means of lantern slides, films and talkies, while here cinemas and talkies are seldom used for educative purposes.

5. I would, therefore, invite the Heads of Education Department, universities, colleges and schools, Members of the Legislative Councils and Assemblies and patriotic leaders in the country to study dispassionately my scheme of education as outlined in the books mentioned above and find ways and means for giving it a fair trial. It is a matter of shame that India does not possess a single Educational Museum, excepting a small model of it established by me at Dayalbagh (Agra). The existing public museums in the country,—especially those devoted to exhibits of antiquity, which make up more than half of the entire number, are of little use for purposes of imparting general knowledge. Who does not feel shocked at the colossal ignorance betrayed by school-students of the present day in the matter of objects of everyday use? I cannot conceive of a better plan for wiping off this stigma from our young men and women than by encouraging the establishment of Educational Museums as necessary adjuncts to educational institutes.

6. I hope that heads of colleges and schools will take active part in the formation of such museums; and newspapers and journals will interest in the cause of education through museums and advocate their establishment. I entreat one and all of the heads of educational institutions of India, to have pity for the poor students and the masses, and educate them by proper methods.

7. I shall be glad to send "Hints on Museum Education" and "Educational Reformation in India" to any sympathetic person who does not wish to buy them, on his sending me Re. 1/-/- for each book. He can keep it for a week and return to me at his cost in good order. On getting back the book, I will send him postage stamps of -/12/- in a stamped envelope.

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CHAPTER II

Different Branches of Educational Museums

Museum-education is a novel thing in India. Even educated persons entertain strange notions about the objects and functions of different kinds of museums. For example, museums of medical colleges are suitable only for medical students; the Forest Museum of Dehradun was equipped for forest students; The Presidency College of Calcutta has established a geological museum for the teaching of geology; similarly, the Agricultural College of Lyallpur, the Biological Departments of the Agra College and St. John's College at Agra, the University Science College of Calcutta, the Mining College of Dhanbad, the College of Tropical Diseases, and the rest, have furnished their respective laboratories or museums for their technical students only. The Geological or Zoological Departments of the Indian Museum of Calcutta can never be utilised or appreciated by the students of Calcutta in general, until common specimens of geology are set apart and explained by teachers. London alone has 14 Museums of different kinds, a short description of which is given on pages 38 to 46 of "*Hints on Museum Education*". Each of them has published popular explanatory Guide Books and lists of Exhibits. The bigger cities of India should be furnished with general Educational Museums, and if funds are available, there should be established Museums of Health and Hygiene, Social and Temperance Museums, Museums of School Exhibits, Mechanical Museums, Industrial Museums, and the like. All these subjects are branches of Educational Museum. Also, the Museums of (a) Antiquity, (b) Commerce and (c) Fine Arts are other three branches of Educational Museum.

As educated persons entertain several curious and wrong notions about these three branches, I am making an attempt to point out some of the above misconceptions in the next three paragraphs.

(A) *Museums of Antiquity* are so many collections of little utility. They might be compared to the grandmother's nursery tales. On the other hand, museums of modern arts and sciences, discoveries and inventions, if properly explained, can be well-compared with the biographies of self-sacrificing philanthropists and benefactors, discoverers and inventors. It is a wonder of wonders that the heads of the education departments have not thought over and acknowledged the superior claims of general museum-education over the archaeological museums in the course of the last 50 years. Hundreds of useful and interesting things of educative value can be collected with the money now squandered away for relics of antiquity. One hundred graduates can be engaged with the money paid to 10 expert archaeologists. I have proved my above assertions by arguments and reasoning on pages 270 to 282 of "*Hints on Museum Education*". But orthodoxy reigns supreme everywhere and at all times, in religion, society, and even schools, colleges and universities. The orthodox allopaths persecuted Hanemann and our orthodox Government is supporting allopaths, although thousands of homeopaths are giving wonderful medical relief to millions of Indians. When the orthodox British Parliament could oppose George Stephenson in introducing railways in England, it is no wonder that the Government of India and some hobbists and interested antiquarians and almost all conductors of Indian Museums are guided by the influence of orthodoxy. It might take a quarter of a century to crush down these adamant ideas. It is highly injudicious and unreasonable to squander away large sums of

public money, year after year, for objects of little utility, and to neglect the natural means of educating millions of students on useful subjects through the means of museums. It is a lamentable fact that most of the Indian museums are giving preference to the relics of antiquity over hundreds of useful things of daily use. These hobbists, even the learned bodies as the Universities of Calcutta and Dacca, are spending big amounts of money in collecting stony or metallic statues, etc. to the neglect of useful objects of scientific and industrial nature for teaching students and the public with them. Ah ! how modern useful scientific objects are overlooked, and time, money and intellect are wasted in this manner.

The period before three or four thousand years may be likened to the childhood of mankind. All praise is due to men of the period for their sculpture, architecture, epigraphy and artistic skill in the absence of suitable tools and machines. But, those things of curiosity have no intrinsic or utilitarian value in comparison with the useful manufactures of modern times. Even small things such as pins, needles, safety pins, nibs, screws, printing types, bolts and nuts, files, and ordinary tools, etc., too numerous to mention them here, are far more useful than the curiosities of old. Viewed in comparison with the modern watches, telegraphs, type-writers, sewing machines, telephones, microscopes, telescopes, cinemas, cycles, gramophones, electric lamps, stoves, fans, radios, etc. and hundreds of similar things, the unearthed relics are like toys of which the ancients were proud. They had no dream of modern inventions and industries. It is a happy sign that with the exception of the officers of the archaeological department, who are supported by Government with comfortable salaries, very limited body of persons, say one per cent. of the educated people, one in a thousand

students, and one in ten lacs of people, cherish or nourish in their mind the pictures of earthen, stony or metallic things of old. But it would be a retrograde policy of the heads of education department to blindly follow the archaeologists and neglect their duty of spreading the right sort of education amongst the students. Think for a moment that in this century the monarchical governments of Russia, Turkey, Italy, Germany and Persia have been changed into republican governments; but it is a sad spectacle to see that the orthodox conductors of Indian museums continue to reign supreme, and yet no reformers are born to cry halt to them. If my ideas are wrong, criticise them with arguments and if proved wrong, rectify them; otherwise, boldly, take up the right course; and welcome Educational Museums with all your heart and bid goodbye to archaeological museums !

(B) *Commercial Museums.* By a rough estimate I have found out that there are about 200 varieties of principal raw products of India (as selected by me from the very useful Government Publication entitled Sir George Watt's *Commercial Products of India* 1908) and there are about 100 kinds of Indian Arts as enlisted in the volume entitled Sir George Watt's "*Art Exhibition of Delhi, 1903.*" At present the number of indigenous art products might be 200; and the number of foreign products is probably 200 or more*. A wrong idea dominates the mind of the organisers of the recently-started very few Commercial Museums of India, that their sole object is pushing on the sale of country-made articles. The long-established annual *melas*, fairs and exhibitions in different places of India have been fulfilling this object; and the recently started

*Note :—I have no space to give a list of raw-products and art-productions of India and foreign countries in this small pamphlet.

Swadeshi Exhibitions are suitable methods for the show and sale of present-day country-made articles.

They also give encouragement to the manufacturers and artisans. Millions of people visit them and feel pleasure in buying their requisites. The organisers of Commercial Museums, whether started by Government, Municipalities, District Boards, or private Associations, should be actuated by a higher object than the mere sale of articles. Education is that higher object. Let me briefly explain the means by which that object can be achieved.

(a) Raw materials, handicrafts, and manufactured articles of India should be collected.

(b) Similar articles manufactured in foreign countries and imported into India, should also be placed side by side with the Indian products for comparison with regard to their quality, workmanship and price. It is a wrong policy to exclude foreign things from these Museums.

(c) All exhibits should be properly named in English and local vernaculars, numbered, labelled and briefly specified. They should be classified, catalogued and explained in booklets, to be published according to different classes. In the booklets the localities where they are produced, their properties, prices and uses should also be specified. When possible, processes of their manufacture should also be described. These booklets should be sold at popular prices.

(d) Guides or teachers should be appointed to explain the exhibits to visitors and enquirers.

(e) Teachers of schools and colleges should first study these booklets and then bring their students to the museum.

(f) Occasional lectures of popular nature should be delivered by the help of the exhibits.

I give below a list of only 20 classes, so that the readers might form some idea of them:—

Metals	Leather
Stones	Horns
Glasses	Shells
Precious stones	Conches
Ceramics	Rubber
Pottery	Wax
Cement	Textiles
Bones	Feathers
Ivory	Embroidery
Woods	Printing

Again I repeat that until and unless *Education* be made the prime object of a commercial museum, its utility is very meagre. If the object of education is excluded, such a museum is reduced to nothing better than a mere mercantile shop.

(C) *Fine Arts Museum*. Fine Arts are divided into five kinds,—painting, sculpture, music, dancing and singing.

The museums of fine arts in foreign countries are generally called Art-galleries, where famous or valuable paintings are exhibited. In this country, exhibitions of valuable and nice paintings are held in different localities of India from time to time; and prizes are awarded to the best painters or the exhibitors of best paintings. Some Indian States have established Art Galleries in their capitals. Ordinary visitors have got no aesthetic culture or taste to appreciate them; they look at them with curiosity. It would be a very costly affair to establish public Art-galleries in principal cities of India with public money, because the prices of famous paintings of great artists are exorbitant. At present, it is not judicious to buy and collect them for general students and the public, because the cost of half-a-dozen renowned pain-

tings will lead to the exclusion of hundreds of useful exhibits of other branches of educational museums. Only Rulers of Indian States and rich people can adorn their parlours with costly paintings. Town halls, churches, *mandirs*, tombs, university buildings, public gardens, etc. are suitable places for placing valuable paintings, statues or busts of famous persons, idols, inscriptions, artistic monuments and memorials, caligraphic miniatures, panoramas of famous cities, historical events and scenes, processions of kings, pictures of decisive battles, etc., etc. An Educational Museum should contain these things either in original if presented in the form of photographs or in photo-prints for the education of students, teachers and the public.

CHAPTER III

Classification of Museum Exhibits

I. Foods:—(1) Cereals, Pulses, Starchy Foods; (2) Vegetables, Fruits, Nuts, Roots, Bulbs, Greens; (3) Milk and its Products; (4) Animal Foods; (5) Invalid Foods; (6) Miscellaneous Foods; etc.

II. Ordinary Drugs:—(1) Spices; (2) Vegetable Drugs; (3) Mineral Drugs; (4) Animal Drugs; (5) Chemical Drugs; (6) Mixtures and Compound Medicines; (7) Intoxicants.

A. Medical Appliances.

B. Methods of Cure and Mental Cures:—

1st. Systems of Curing Diseases (14 kinds),

2nd. Various Methods of Cure (21 kinds),

3rd. Mental Cures (13 kinds).

III. Dresses.—Toilets.

IV. Ornaments and Jewels.

V. Household Utensils.

VI. Household and Office Furniture and Building Materials.

VII. Houses and Architecture:—Important Buildings and Structures of the World, such as, Temples, Churches, Tombs, Bridges, Manufactories, Bird's-eye Views.

VIII. Land, Water and Air Vehicles.

IX. Papers and Printings.

X. Writing, Drawing, Printing and Teaching Materials.

XI. Drawings, Paintings, Photographs, Lithographs and Printed Pictures.

XII. Stamps and Coins.

XIII. Sports, Amusements and Toys.

XIV. Musical Instruments and Plays.

XV. Geology.—Minerals, Metals, Earths, Stones, Fossils, etc.—

XVI. Minerals and Metals.

XVII. Botany.—Trees, Plants, Leaves, Flowers, Timber, Roots, Barks, Fruits, Seeds, etc.—Vegetable Products.

XVIII. Chemistry:—Chemicals, Crystals, Acids, Alkalies, Salts, etc.

XIX. Mechanics and Machines:—Tools, Implements, Weapons.—Mechanical Movements.

Appliances and Machines relating to,—(a) Workshop, (b) Gardening, (c) Agriculture, (d) Dairy, (e) Spinning, (f) Weaving, (g) Navigation. (h) Railways, (i) Aeroplanes, (j) Motor Cars, (k) Tramways, (l) Steam Engines, (m) Grinding, (n) Hydraulic Press, (o) Electric Engines, (p) Cranes, (q) Clocks and Watches, etc.

XX. Arts and Manufactures:—

A. Textiles:—Cotton, Woollen, Silken, Jute, Flax, other Fabrics, as, Carpets, Durri, Mats, Velvets, *Galicha*, Oilcloths, Waterproofs, Waxcloths, Tarpaulins, etc.—Dyeing and Printing.

Raw Materials:—Cotton, Wool, Silk, Jute, Flax, Hemp, Agate, etc.

B. Hardwares:—Raw materials of pig iron, cast iron, wrought iron, steel, zinc, copper, tin, lead, aluminium, etc.

C. Metal-wares with workmanship on Gold, Silver, Copper, Iron, Brass, *Kansa*, Tin, Aluminium, etc.—Engraving, Enamelling, and Electroplating.

D. Pottery, Porcelain, Glasswares, Cement, Plaster, Works on Ivory, Stone, Wood, Horn, Bone, Leather, Mother-of-Pearl, Precious Stones, Conches, *Shola*, Coconuts, Lacquerwares, Rubber-articles, Brush-works, Bone-works, Bamboo-works, etc.

E. Dyes, Paints, Varnishes, Polishes.

XXI. Physics:—Statics, Hydrostatics, Dynamics, Sound, Heat, Light, Magnetism.

XXII. Electricity.

XXIII. Some other Sciences:—(a) Geography and Physiography, (b) Astronomy, (c) Physiology and Pathology, (d) Engineering, (e) Sanitation, (f) Social Science, (g) Economics, (h) Ethnology, (i) Anthropology, (j) Antiquity and (k) Archaeology, etc.

XXIV. Some Mysterious Sciences:—(a) Physiology. (b) Astrology. (c) Palmistry, (d) Phrenology, (e) Mesmerism, (f) Hypnotism, (g) Readings from Handwritings, (h) Spiritualism, (i) Occultism, (j) Yoga, etc.

XXV. Some Modern Methods of Education:—(1) Kindergarten, (2) First Aid, (3) Scouting, (4) Social Service, (5) Puzzles and Curiosities, Optical Illusions, Magic, Comical Dresses, Cartoons, Caricatures, Punch, Decorations, etc.

XXVI. School Exhibits from (a) Primary, Secondary and High Schools, Technical Schools and Colleges; (b) Girls Schools and Colleges.

XXVII. Guide Books and Maps of Important Railways and Places.

XXVIII. Reports, Curricula and Rules of Indian and Foreign Schools, Colleges, Universities, Societies, Museums, and Exhibitions.

XXIX. Directories, Catalogues, Dictionaries and Books of Reference.

XXX. Pictures, Nativities, Horoscopes, Handwritings and Signatures of Famous Persons.

XXXI. Social, Postal and Commercial Forms.—Deeds and Documents.

XXXII. Useful and Interesting Information and Statistics.

XXXIII. Museum Library.

XXXIV. Children's Museums.

XXXV. Suggestions for Reformation.

CHAPTER IV

Education in India

"What does it matter if this Higher Education remains or goes? It would be better, if the people got a little technical education so that they might find work and earn their bread, instead of dawdling about and crying for service".

—Swami Vivekanand.

"It is a healthy sign that there is a remarkable agreement among educationists to-day that the system of education requires drastic revision from the foundation to flag-pole".

—Prof. Radhakrishnan in his Convocation Address, 7th November, 1934.

"Had I been a millionaire, I would have engaged a big electric plant for blowing 1,000 trumpets and beating 1,000 drums for proclaiming before the educational authorities of India the simple fact that some present nations of the world have become great and prosperous by manufactures and armaments worked by machines combined with patriotic, sacrificing and co-operative spirit; but not by the study of antiquity, anthropology, philology, dead languages, philosophy and similar ornamental subjects, and never by communal strifes and religious bigotry. Therefore, hundreds of Technical Schools and Colleges should be opened for teaching the uses of at least common tools and machines."

—Hints on Museum Education, page 187.

It is a lamentable fact that the Schools, Colleges and Universities of India, in the course of the last 100 years, have not adopted the right method of education. I believe that unless and until the right

method is adopted, the industrial education will not make progress. Therefore, all well-wishers of the country should deeply think and think over the matter and find out which kind of education is now necessary for awakening the general intelligence of the people and especially of the student community; so that they can apply their bodily and mental faculties in the right direction for their own progress as well as for the general uplift of the nation. Political freedom is one of the conditions for the desired progress of the nation. But in order to make the people fit for self-government, their present system of education should be thoroughly changed and remodelled. At present, the coaching of all ornamental subjects in the Universities should be kept in abeyance at least for a quarter of a century; and with the money saved by this manner, the education and practical application of the science of mechanics, physics, electricity; and some technical arts and manufactures, should be substituted.

Now I will try to explain briefly my proposition mooted in the previous paragraph by some concrete examples. The students should first acquire general knowledge, and gradually detailed knowledge, of such things which we are using every day and without which modern civilization is not possible, our necessities and comforts cannot be secured, and our life would become uncomfortable. All sensible men will agree with the above view; but a few persons would practically come forward and act up to it. Let me briefly give below a list of some of those things, so that the readers might form some idea of what I mean by them:—such as, needles, nails, screws, pins and nibs, slates, pencils, hurricane lamps, oil and gas stoves, domestic utensils, furniture, building materials, sanitary appliances, etc.,

ordinary tools and implements such as, hammers, saws, planes, drills, files, wrenches, etc., clocks and watches, microscopes, telescopes, magic lanterns, etc., bicycles, type-writers, sewing machines, printing presses and materials, photographic cameras, etc., turning, drilling, planing, shearing, punching, sewing, hammering, crushing machines, etc., tools and appliances used in dairy, agriculture, gardening, weaving, knitting, etc., and hundreds of things of common use. Knowledge of them would stimulate and develop the mental faculty of the students and the intelligent people, especially artisans and manufacturers. By the use of them the dexterity of the limbs will increase; niceties of the perceptions of our sense-organs will improve; and thus the latent intelligence will be awakened and will generate a strong desire for improving the arts and manufactures of India; will dispel the present false shame for manual work;—this kind of culture is far more important and valuable than ornamental literary culture. If my proposition be true, then why should the universities, colleges and schools spend so much money on literary education, and so little on technical education. Those who have a tendency to acquire literary knowledge can be allowed to study at home and obtain degrees from Universities in open competitive examinations. Please do not think for a moment that I am against literary culture; but I am against spending the poor educational grants in coaching students in higher literary subjects. Vyas, Valmiki, Kalidas, Shakespeare, Milton, Rabindranath, Scott, and a lot of writers, great historians, linguists, philosophers, etc., were not the productions of Universities. I have quoted numerous such examples and instances of famous writers on literary subjects, and famous men of the world, and their views on University-education in my book ~~“The~~

tional Reformation in India" (270 pages, Re. 1) in support of my proposition. I shall be glad to invite any objections advanced against my views. I shall try to rebut those objections.

If I have succeeded to prove to a certain extent that my proposition is right, then it follows as a natural consequence that a suitable collection of common things of arts, science and industry should be made in proper localities of the principal cities of India, the name of such collection is Educational Museum. The exhibits of a museum should be systematically classified and arranged, labelled and briefly explained. Teachers or guides should describe their properties and uses to the visitors and enquirers. It is to be regretted that there is not a single museum of this nature in this vast country. Most of the museums of India are full of less important relics of antiquity. Another deplorable fact is that the heads of education department, schools, colleges and universities are quite satisfied with this state of things for a century since the advent of English system of education in India. A more pitiable circumstance is that most of them think it *infradignitatem* even to consider the repeated submissions of any well-reasoned proposal for the last 5 years. If a model museum is established in a provincial town, small imitations can be easily started in schools and colleges of the Province.

Education by means of museums is the cheapest, quickest and most efficient method of imparting education, specially in India wherein 95. per cent. of the people are illiterate. General knowledge of common things in the three kingdoms, as well as in arts and manufactures, can be easily imparted even to the illiterate if they are anxious to acquire it by means of museums. Millions of Indians for centuries

have earned and are still earning their livelihood without reading books. They learn their arts and handicrafts from their ancestors; even in the present days thousands of illiterate persons are using tools and machines. If you impart more practical lessons by showing better things than those made by them, they will have impetus from within to produce better things and learn to make new things by improved methods with or without machines. As books and schools are necessary for the culture of the mind, so museums with guides or teachers are necessary for the culture of the mental faculties and five senses. As laboratories are indispensable for teaching practical sciences, so museums are necessary for general students and the masses. Education without them is not only defective, but incomplete.

Educational museums will also contain exhibits of literary and artistic nature, such as calligraphy, drawings, paintings, scientific, musical, mechanical and electrical instruments and amusing toys; magical appliances; puzzles and curiosities in literary subjects; mythological, historical, geographical, and astronomical pictures: deeds and documents; manuscripts, account-books, commercial and postal forms; pictures of sports and pastimes; ethnological, anthropological, meteorological, phrenological, astrological, charts or pictures; photographs, photoprints, lithographs and chromo-lithos of palmistry, six *chakras* (plexuses); pictures and charts of physiology and pathology and hygiene; manners and customs of the peoples of different countries; likenesses of famous persons and their hand-writings; natural phenomena; pictures of famous buildings and structures; diagrams of steam-engines, steamers, aeroplanes and their parts and sections; wonders of art; tools and machines; dresses and habitations of peoples; land, water and air vehicles; antiquities, coins, seals and medals; flowers, fruits

and vegetables; medical appliances; ordinary foods; insects, worms, birds, fishes, beasts; products of the sea; minerals, metals and alloys; jewels, pictures, charts and primary books on 14 systems on medical treatment, 24 methods of cure and 14 kinds of mental cure; social science, first-aid, scouting, kindergarten; selected Indian and foreign school exhibits, social and charitable institutions of India; important statistics of India; etc., etc. If these things are not sufficiently interesting and if they have no educative value, I am incapable to imagine what things on earth can stimulate inquisitiveness and pleasure in the minds of the students and intelligent persons.

In conclusion, I appeal to the common sense, intelligence and sense of patriotism of the Ministers of Education, Directors of Public Instruction, Health and Industries, and the heads of the Universities, Colleges and Schools, the political and social reformers and leaders of India to purge their minds free from all inherited or deep-rooted prejudices or predilections about stereotyped educational policy or system of the 19th century and calmly think over the modern ever-progressive systems of the 20th century; and to boldly introduce thorough radical changes as are necessary under the present circumstances. If 10,000 educated self-sacrificing young men devote their energies in teaching the masses at least for five years on the subjects mentioned above with museum-exhibits and with the help of popular books on technical subjects, India will immensely advance in a short time. We should study the present educational systems of Japan, Turkey, Russia, Italy, U.S.A., Germany, England and follow them in India *mutatis mutandis*.

("Calcutta Municipal Gazette," 18th March 1939)

CHAPTER V

Culture of the Five Senses

1. As our body and its organs are maintained and developed by nutritious foods, pure water and fresh air and by suitable exercises, similarly our mind develops and improves by the acquisition of knowledge through the sense-organs. Although newborn babies possess all the sense-organs, they acquire a faint knowledge of the external things by degrees by means of repeated exercises and the experiences of those organs in the course of several months; and only during the course of several years, children acquire the power of receiving finer perceptions and experiences. The baby lying on the cradle gazes vacantly at the pictures of things presented on its retina, but it cannot form any idea of distance, shape, or color. You might have read the story: 'Rama crying for the Moon': on seeing the full moon, the child Rama asked his mother to bring the moon down within his reach and began to cry for it. The mother felt perplexed. At last somebody suggested to her to bring a mirror and show the child the moon's image reflected on the mirror. This pacified and satisfied his budding curiosity. In history, you will find that Akbar kept some babies in a *gunga mahal* (a quarter of the palace for the dumb) upto their 10 or 12 years of age. Therein no one was allowed to talk with them. When they were taken out from the quarter after 8 or 10 years, they behaved as dumb children. Near Agra city about 45 years ago one male baby was taken away by a she-wolf, she nourished it with her milk. It walked like a quadruped and behaved like a wolf. When he was taken out from the den, he lived for a few months. His body was buried

near Secundra, the tomb of Akbar. There are records of similar instances. It is the duty of the parents and teachers to awaken the sense-organs of children by repeatedly showing them different things at different distances; by producing various sounds with bells or flutes; by placing pinches of sugar or salt over their tongues; holding different scented flowers or essences near their nose; and by touching their skin with warm or cold things: or awakening their nerves by pinching, tapping, shaking, rubbing or titillating at the armpits. We acquire knowledge of the various properties of objects by means of our perceptions of those properties by the 5 sense-organs. On pages 51 to 56 of "*Hints on Museum Education*", a descriptive list of the Properties as Perceived by the Sense-organs is given. In fact, the names of our sensations are nothing but the properties of objects as perceived by us. In fact the sense-perceptions are the foundation of all knowledge. It is therefore necessary that the foundation should be well and truly laid and on right lines.

2. If the above facts are rightly appreciated, we can easily trace out methods in developing the five kinds of sense-faculties of children. Let me now briefly enumerate some of the methods which might well be adopted by parents and teachers to awaken the different senses.

I. Sense of Sight

By the use of eyes we know principally four things:— (a) Distance, (b) Color, (c) Shape, (d) Size and distinguish different kinds and shades of light.

(a) Distances should be taught by foot-rules, cubits, tapes, chains, etc. The three-dimensions should be explained.

(b) Colors should be taught by Color Charts printed with Primary and Secondary Colors; Rainbow Colors and Paint-charts, containing various combinations of colors.

(c) Geometrical lines, surfaces and solids give an idea of various shapes.

(d) Surfaces of slightly different sizes should be shown to test recognition.

II. Sense of Touch.

Different degrees of heat and cold should be shown in by their effect on clinical thermometers, and thermometers used for reading degrees of heat and cold of atmosphere, liquids and solids. Sense of touch discriminates softness and hardness, smooth and rough surfaces, different weights, and perceives undulations and vibrations, etc.

III. Sense of Taste.

Generally there are six kinds of taste, which should be exemplified by different articles, (a) sweet, (b) acid, (c) pungent, (d) saltish, (e) bitter, (f) *kashay कषाय* as *haritaki*. Distilled water is tasteless. There are hundreds of degrees of these tastes and their combinations.

IV. Sense of Hearing

Discordant and musical sounds should be explained by random strokes and musical instruments of percussion, stringed instruments and wind instruments, such as, *dhol* and *khanjani*; violin and *sitar*, flute and *bansi*.

V. Sense of Smell.

This sense should be educated by different kinds of flowers, fruits, leaves, essences; and such

as camphor, ammonia, sulphur, turpentine, sandal, oils, chillies, saffron, etc.

3. It is superfluous to add here that in order to get true impressions of objects, the organs should be kept healthy. All men, especially students, should study the rules about keeping their organs healthy and follow those rules. This study should be made compulsory. Defective or diseased organs take in wrong or imperfect impressions of the properties of objects. For example, those, who have nasal defects, cannot know when they inhale obnoxious smell or dusty atmosphere; defective ears prevent the enjoyment of sweet music; diseased eyes have hazy visions, and cannot enjoy the beauties of nice pictures, natural scenes, beautiful butterflies, birds, fishes or human faces; and so on. The diseases of the organs should be cured, as far as possible.

4. If the above propositions are accepted, we can safely draw the conclusion that the educational institutions which neglect to teach their students how to keep their sense-organs healthy and efficient and do not take proper steps to develop the sense-faculties from babyhood to youth by procuring and collecting such objects by perceiving which the sense-organs can be trained and developed, ought to reform themselves, at least, in this respect. I think that a primary school can collect the necessary objects at a cost of Rs. 10/-, (the rest can be collected from local gardens, etc. by the teachers and boys); a secondary school, at a cost of Rs. 50/-; a high school, at Rs. 100/-; a college, at Rs. 200/-; and a university, at Rs. 2,000/-. The reason of my quoting different costs is that the higher-class-students require some costly objects and some scientific appliances for the perception of nicer properties of objects. For example, to help the eyes, magnifying glass, microscope, telescope, binocular, spectacles,

prisms, lenses, etc. will be required. For sense of hearing, ear-drum, tuning fork, some musical instruments of percussion, stringed instruments, wind-instruments: articles to show timber, frequency and amplitude of sounds, gramophone, microphone, talkie, radio, etc. should be collected. To explain the sensations of smell, some scents, scented oils, camphor, turpentine, ammonia, common medicines, and some scented chemicals and gases, pleasant or obnoxious, should be exhibited. To distinguish articles of different tastes, sugar, salts, quinine, *haritaki*, peppermint, soda, common acids, distilled water, mineral waters, sea-water, electrified water, and similar things should be collected. For the cultivation of the sense of touch, the following articles should be collected: thermometers, weights, electric appliances for medical treatment, etc. Alphabets and numbers, journals, books, maps, geometrical figures, musical notation, for the blind will be interesting exhibits in this connection. Some examples of visual illusions, analysis of the sun's rays into rainbow-colors by a prism, reflexion and refraction of rays should be explained, etc. Ventriloquism, sounds of crickets, rattling snakes, etc. are examples of auditory illusions. By this kind of education, the faculty of discriminating nicer sensation will be awakened, and thereby the retentive power of the memory will increase. As it is impossible to give an idea of sweetness without putting a pinch of sugar on the tongue, so it is impossible to get an idea of an ant without seeing it or of an electric shock without experiencing it. Thus the sensitive faculty of infants or youths has to be awakened by actual perceptions. This system of education is far better than mere oral or written descriptions;— this is the natural and psychological system, which deserves to be adopted in every school in India, as well as any other country of the world. I am sure, no true

educationist will have a word to say against the importance of educating sense-perceptions by collecting and exhibiting a number of objects for the purpose; and it is these objects which constitute some of the exhibits of an Educational Museum.

5. Let me now cite some instances of well-cultivated and refined sense-perceptions, so that readers can form some conception of the finer culture of senses. Soldiers, hunters and archers have to shoot their arrows or bullets at distant shots. I saw archers to see things first and then hit their arrows at them with closed eyes, or by perceiving distances by sound emanating from the objects. Boatmen learn to prognosticate coming storms and cultivators forecast the weather by watching the nature of the sky and atmosphere. Goldsmiths, jewellers and watch-repairers have sharp close vision. A trained musical ear can detect faulty play of a single musical instrument distinctly, when a full band is playing. Baden-Powell mentioned instances in which military-spies could guess the exact distance at which the enemy's cavalry is galloping. Students should learn to restrain their breath to some extent where obnoxious or unhealthy smell prevails. Different kinds of mango can be distinguished by those who have cultivated their sense of smell, without tasting them. By refining our taste we can guard our tongue against unhealthy or irritating foods, if we can keep the tongue in a natural condition by abstaining from smoking and drinking. All boys and girls should be trained to form correct idea of the three dimensions by observing photographs taken on a plain surface of solid things, buildings, avenues, mountains or scenes,—because now-a-days a good deal of education shall have to be imparted by means of photo-pictures. Books should be published dealing with the methods of cultivating the sense-culture.

The educated blind persons have highly developed their sense of touch by reading and writing alphabets for the blind with their fingers. The wonderful world-renowned graduate lady Miss Helen Keller has so nicely cultivated her sense of touch that she reads the words uttered by others by touching their mouth with her palm and their vocal glands with her fingers

CHAPTER VI

Five Principal Methods of Child Education

1st Method.—The culture of the five senses by proper means as hinted in Chapter V of this book. It is superfluous to add here, that for the education of the senses, the sense-organs should be kept clean, healthy and efficient. The teachers of infant-schools should practically show and teach the infants how to cleanse their eyes, nostrils, tooth, tongue, skin and other parts of the body.*

2nd Method.—Adoption of suitable plays and recreations, such as, drilling, singing, dancing, free-hand exercises, exercises with physical apparatus, indoor and outdoor games, playing with ordinary musical instruments, scouting, and other suitable physical and mental recreations according to age, health, nourishment, development, and other circumstances of children.

3rd Method.—The education as imparted in the primary schools of different Provinces of India.

*I have published the following cheap popular books which contain the above rules:—(1) Care of the Eyes, (2) Care of the Ear, (3) Care of the Nose, (4) Care of the Teeth and Mouth, (5) Care of the Skin and Personal Hygiene.

This method has several defects, in as much as it is not based on the nature of Indian children. I have no space here to dilate on this method within a small space at my disposal.

4th Method.—Kindergarten system of education followed in the West. As this system is very costly for the general schools of India, it should be modified and Indianised according to the means of Indian schools,—especially village schools.

5th Method.—It is Children's Museum. As both food, and water are needed for the up-keep of our body, as pure air and sun's rays are required for our healthy growth, similarly, in modern times, children should be educated by means of kindergarten and museum. But it is a matter of great regret that generally, the heads of education department, and colleges and schools believe in the kindergarten system only, because some Western schools have adopted it. But Museum-education is quite a novel thing in India

But if the educationists deeply think over the utility of education by means of Museums, I believe that they will at once come to the conclusion that without museum, education will remain incomplete. Both Kindergarten and Museum stimulate and cultivate powers of (a) observation, (b) discrimination, (c) judgement and (d) expression,—these are the four basic factors of acquiring knowledge. As play-things and handicrafts of kindergarten develop the four factors: similarly, the exhibits of ordinary objects around us and which are often used by us. if shown and explained by teachers, will generate the faculty of observation and discrimination of the children, and enable them to judge about them and express their ideas orally or in writing or drawing. In short, both these methods are complementary to each other. Every kindergarten school

should be furnished with museum exhibits. Moreover, without museum-education literary education of children is incomplete. I am at a loss to understand why museum education is withheld from kindergarten schools!

In the small compass of this pamphlet I give below a short list of some necessary exhibits of a Children's Museum. The teachers should select such articles in which the children take interest or such articles the knowledge of which is very important. Several primary schools of a district can co-operate and start a travelling Children's Museum. They can jointly engage museum teachers for imparting museum-education to the different schools by turn.

List of Some Exhibits of a Children's Museum :—

1. Models of fruits, vegetables, leaves, flowers ; or their illustrated pictures.
2. Dried fruits.
3. Cereals, grains, pulses.
4. Dolls, doll-houses, mechanical and ordinary toys.
5. Kindergarten appliances suitable for Indian boys and girls.
6. Models of edible fishes and eggs.
7. Ordinary toilets.
8. Common tools and appliances.
9. Medical appliances,—thermometers, measure-glasses, spoons, watch, clock, eye-cup, etc.
10. Pictures or originals of physical appliances.
11. Photographs of various plays and recreations.
12. Samples of good handwritings and drawings.
13. Drawings and paintings of school-children.
14. Model arts and sculptures.
15. Illustrated pictures of animals, birds, fishes, insects, butterflies, snakes, scorpions, etc.
16. Pictures of natural phenomena.

17. Spices and common drugs.
18. Pictures of land, water and air vehicles.
19. Pictures of celebrated buildings, *mandirs*, churches, monuments, memorials, bridges, railways, etc.
20. Charts of childwelfare, health and hygiene.
21. Pictures of household furniture and articles.
22. Cartoons, caricatures, facial expressions.
23. Samples of kindergarten works.
24. Geometrical designs and decorations.
25. Literature for the blind. Deaf alphabets.
26. Color-charts and paint-charts.
27. Garlands of different materials.
28. Races of mankind. Manners and customs of different peoples.
29. Some stuffed or preserved animals, birds, insects, poisonous snakes, etc.
30. Small telescope and microscope.
31. Samples of sewing, embroidery, lace, etc.
32. Common weights and measures.
33. Common works of art.
34. Puzzles and curiosities. Visual illusions.
35. Instructive pictures of various kinds.
36. Ordinary ornaments. Insanitary ornaments. Imitation precious stones.
37. Stereoscope, gramophone, prism, lens, oval mirrors, etc.
38. Toy cinemas.
39. Magic appliances.
40. Masks and fanciful dresses for masquerade.

I passionately appeal to the conductors of all infant-schools of India to start small Children's Museums in them on the lines indicated above; because I am sure that in course of a year the general knowledge and intelligence of the infants will increase. So I request them to calmly consider my above suggestion and practically carry it out, and thus discharge their duty to young students.

The first Children's Museum was started in 1899 at Brooklyn, a part of New York City, U. S. A. Now more than 40 cities of U.S.A. have such museums. The first museum is annually visited by half-a-million children. I request the readers of this book to study 10 pages of Chapter III (Education by Museum) of my book "*Educational Reformation in India*". The contents of a Children's Museum should be such as are suitable for children of India. It can be easily started in big cities like Calcutta, Bombay, Madras, Delhi, or Lahore in course of two or three months with a small capital of Rs. 2,000/- in each case, for buying the exhibits. Those who have an intense desire for educating the infants in the right manner, they alone can appreciate my proposal. It is incumbent upon all intelligent and educated citizens to think over their duties in this respect. For the last six years I have been crying out before the heads of educational institutions of India that they should discharge their duties by educating the children on the uses of common things of daily use; but, to my great surprise and sorrow, they have presented a deaf ear to my repeated cries. The result of this kind of callousness on their part, is experienced every day and every where amongst the students of schools, colleges and universities, who show lamentable ignorance of the properties of ordinary things; of the sanitary laws and the rules for preservation of health; although they are learned in bookish knowledge acquired at a great expense in course of 10 to 15 years. As I have already cited instances of such ignorance in my books on Museum Education, I have no space to repeat them here. My life is short and my means is scanty, to raise my dolorous voice again and again! I finish this paragraph with one sentence;—Let them have pity on the condition of the young generation.

CHAPTER VII

Educational Museums at Calcutta and other Towns

1. I am grieved to announce this to the educated men of Bengal that the University, Colleges and High Schools of Calcutta have committed a great mistake by neglecting to materialize the idea of starting a model Educational Museum at Calcutta of the type described in my book "Hints on Museum Education" 300 pages, Re. 1/- for educating thousands of students and the general public in respect of the most useful things. My scheme, sketched in the book, has been highly appreciated by more than 120 educationists, journals and newspapers. Please read my books "Necessity of Educational Museums", pages 52, -/4/- and also Chapter VIII of this book.

2. An Educational Museum can easily be started at Calcutta in a house rented at Rs. 200/- or so per month, with 2 or 3 teachers employed at Rs. 150/- and menial establishment at Rs. 50/-, i.e., with a total monthly cost Rs. 400/- or so. The initial cost might be Rs. 5000/- including furniture.

List of Contributions (which may be expected)

	<i>For initial cost</i>	<i>For recurring expenses</i>
	Rs.	Rs.
Calcutta University	1000/-	100/-
Director of Public Instruction	500/-	50/-
Director of Public Health	500/-	50/-
" Industries	500/-	50/-
Calcutta Corporation	1000/-	100/-
45 Colleges of Calcutta and its environments at Rs. 50/- and 10/- respectively	2250/-	450/-

	For initial cost Rs.	For recurring expenses Rs.
100 High Schools of Calcutta and suburbs at Rs. 20/- and Rs. 2/- respectively	2000/- <hr/> 7750/-	200/- <hr/> 1000/-

Some of the above institutions are not expected to appreciate the importance of such a Model Museum in Bengal and may not agree to pay anything for this method of education. As regards help from the Bengal Government, I have little hope of thrusting into the mind and heart of its Education officers the importance of such a Museum. As to the mentality of the authorities of the "Indian Museum" (of Calcutta) it would be a hopeless task for me to transform their antiquated ideas of the utility of ancient stony or earthy things. Another mundanismo might be necessary to adapt their mind to appreciate the wonders of the 20th Century. What I have written above about Educational Museum at Calcutta is equally applicable to other towns or educational centres, *mutatis mutandis*.

Although sketches of the scheme of an Educational Museum are published in my books on museum education, yet it is rather difficult for one to form a clear conception of it without actually seeing a running museum of the type. Therefore, I respectfully invite those who may have decided to start an Educational Museum in a big town, to take the trouble of paying an inspection-visit to our small model Educational Museum at Dayalbagh, Agra.

Methinks, that some old great-great grandmothers are guarding the Indian Museums against the entrance of modern exhibits of science and arts,

discoveries and inventions ; because they are jealous of their 100-times great-great grandchildren of the 20th century, who are born 2000 or 3000 years after them ! As Alexander and Napoleon conquered several countries with their armies, similarly some great educational reformers are now needed to crush down deep-rooted prejudices and their helpmate obstinacy, with their reasoning and argument. Otherwise, reformation in education with respect to museum-education is not possible within the near future.

CHAPTER VIII

Additional Reviews

Additional Reviews of my principal book *Hints on Museum Education* (pages 305, price Rs. 1/-). are published here.

My object in publishing these reviews is to show that my scheme of Education by Museums has been appreciated and supported by the Press and heads of educational institutions ; and a few museum-curators. About 120 reviews are printed thus:—

(1) *Educational Museums at the Educational Centres of India*, (pages 72, price 6 annas). Contains Reviews nos. 1 to 11.

(2) *Education through Museum* (pages 80, price 6 annas). Contains Reviews nos. 12 to 58.

(3) *Necessity of Educational Museums* (pages 59, price 4 annas). Contains Reviews nos. 59 to 101.

(4) This pamphlet named "*Appeal for Museum Education*" (pages 50, price 4 annas). Contains Reviews nos. 105 to 119.

I never published these reviews with the hope of selling even one dozen books, because those in education department seldom buy or read such books. I distributed about 200 pamphlets "*Necessity of Educational Museums*" (containing the Reviews) to the Vice-Chancellors of all the Universities, all Directors of Public Instruction, Ministers of Education, etc., but few of them cared to procure and peruse the book "*Hints on Museum Education*." Perhaps, they believe that there can be no education by means of museum-exhibits. This belief is caused by deep-rooted prejudices. I had another sad experience in this connection. I distributed the Reviews to the Curators of Principal Museums of India. But it is strange that they never asked me to send the book "*Hints on Museum Education*." Orthodoxy and prejudices have so much influenced their mind, that they think that there can be no reformation of their museums. I published these books at a great expense for reforming the Indian Museums; but I experienced great neglect on their part in perusing the book. Such are the ways of the world! Undaunted by their unsympathetic behaviour, I am publishing 19 fresh Reviews in this pamphlet.

Reviews

No. 105.

Senate House

Allahabad : *October 15, 1938.*

Dear Sir,

Your letter of October 13. I have read your book "*Hints on Museum Education*" with much interest. It contains valuable information.

Yours faithfully

AMARNATH JHA

Vice-Chancellor.

No. 106.

Central Municipal Office.

The 21st October 1938.

Dear Sir,

I have read with great pleasure and profit the second copy of "Hints on Museum Education" so kindly supplied to our office by its author Mr. J.C. Basak. I am surprised to notice in its pages such a wonderful marshalling of facts concerning Museum Education which will be of immense value to our educators and social workers. In fact, the book is a veritable pocket encyclopedia which no citizen of awakened India can afford to neglect, if he is to render useful service to the people. It is indeed a valuable mine of information as well as a guide to those who are still groping in the dark, noticing the defects in our social and educational systems.

From my own observations of museums in the West and specially educational and children's museums; I can testify that the book will be a good companion for all teachers and students interested in the welfare of the rising generation. There are thought-provoking suggestions from the pen of the author on which one can meditate with a view to translate some of his mature thoughts into realities. A fairly large section of human life has been covered by the printed pages. The book is a timely publication and I would like to see public bodies (like municipalities, schools, colleges, universities, education departments) undertaking a keen interest in the Hints supplied by the author and acting upon them with a view to transform our India of the present day into the glorious India that is to be. The author is to be congratulated for keeping closely in view the practical standpoint. It may be of great interest to educators here and abroad to learn that the author has already earned our gratitude by his gift of one Education Museum

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at Dayalbagh, Agra, and the nucleus of a similar museum in Calcutta to be conducted by the Corporation of Calcutta. I wish godspeed to these new ventures and trust that his name will be remembered and his memory deeply respected by the future generation for whose intellectual and moral welfare he has given so unreservedly his mature thoughts, judgments and last of all his purse out of which the beginnings of educational museums have been so well laid at Agra and in our own city, Calcutta.

Yours faithfully

SATYANANDA ROY

*Actg. Education Officer,
Fellow Harvard and formerly Clark Universities,
Massachusetts, United States, America.*

No. 107.

Educational and
Political Member,
The Nizam's Government,
Hydrabad, Deccan.

The 20th October 1938.

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"Mr. Basak who has thought carefully on the subject, has written an interesting and instructive book on "Museum Education". The book covers a vast and varied field and shows the high educative value of museums when properly organized".

MEHDI YAR JANG

*Vice-Chancellor, Osmania University,
Political and Educational Member,
Nizam's Government.*

No. 108

July 1938.

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"We think this criticism of our existing museums is well-deserved, and we agree with the author that these museums must be transformed into real educational centres. The book is well worth study not only by the public, but also by the Govt. of India and various Provincial Govts. for the useful hints and suggestions it contains."

"Health" (of Madras).

No. 109.

"Education through Museum"

"In this brochure the author has dealt with (1) the importance of Educational Museums, (2) Hints on Museum Education (which we have reviewed above) and (3) Reviews of "Educational Museums", and makes ardent and earnest appeal to all Govt. officials in British India and to the Rulers of the Indian States and to the authorities of the Universities and Colleges to give his Scheme a trial. We wish him success in his selfless endeavour to spread adult education among the masses through museums of his type".

"Health" (of Madras)

July 1938.

No. 110.

Councils of Post-Graduate
Teaching in Arts and Science,

November 15, 1938.

"I have read Mr. Basak's Scheme of Museum Education with great interest. That museums have great educative value, no body will deny. History,

Geography, Archaeology, Economics and above all general knowledge can be easily taught to students through a Museum. Mr Basak has made it his mission in life to tell the educational agencies of Bengal that they should have a museum attached to every educational institution and I wish him all success in that laudable mission".

KHAGENDRA NATH MITTER,
RAI BAHADUR,

*Ramlanu Lahiri Professor of
Bengali Literature,
Calcutta University.*

No. 111.

Industrial India (of Delhi)
November, 1938.

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"The author has embodied useful suggestions in this volume ("Hints on Museum Education") and if museum is established on the lines suggested by the author it would be on proper educative lines almost the same upon which the museum in Germany was established about thirty years ago."

No. 112.

Federated India
7th December, 1938.

"The Hints on Museum Education are arranged by the author with reference to foods, drugs, physics, electricity, geology, botany, zoology, writing, drawing, painting, etc. He also gives certain useful suggestions for the reformation and co-ordination of all museum activities."

No. 113.

Indian States Gazette.

Srirangam, *November & December No. 1938.*

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"He (author) stands for a thorough overhauling of the present-day education and urges on the conductors of museums to explain the exhibits to the visitors by proper guides in his "*Necessity of Educational Museums.*"

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No. 114

No. 2, Dehi Serampore Road

Calcutta, *5th December, 1938.*

"I have great pleasure in stating that I find Mr. J. C. Basak's "*Hints on Museum Education*" a valuable and thought-provoking contribution to educational literature. So far as I can judge the scheme outlined by him seems practical. The author has concentrated and I believe rightly on things concerned with everyday life. I trust that like the other books of Mr. Basak, this one also will make wide appeal to the public and further that those interested in education will make an attempt to start such museums all over our country."

H. C. Mukherjee, M. A., Ph. D. Head of the English Department and Fellow of Calcutta University, Member, Legislative Assembly, Bengal.

No. 115.

City of Liverpool.

Free Public Museums.

Douglas A. Allan, Ph.D., D. Sc. William Brown Street,
2nd January, 1939.

Dear Mr. Basak,

I am grateful to you for letting me have your interesting reprint of all the letters which you have

recieved criticising your earlier volume "Hints on Museum Education." It is very rarely that an author publishes the details of the reviews he has received and you are to be congratulated on breaking new ground and in placing before those who read the major volume all the additional hints and suggestions which your numerous contributions have submitted to you.

With all good wishes for 1939.

Yours faithfully,
D. A. ALLAN,
Director.

No. 116. Victoria and Albert Museum
South Kensington, London, S. W.I.
17th January, 1939.

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"This book" ("Necessity of Educational Museums")
will be a most useful addition to the Library.

Yours faithfully,
Phillip James
Keeper of the Library.

During the last half century considerable changes have been brought about in the domain of educational theories, ideals and methods. That education alone is regarded as perfect which gives the educands *physically* the use of their hands, *mentally* instills a spirit of research and inquiry in them, and *morally* makes them see and appreciate the other people's point of view. And in my opinion, no other form of education is better calculated to achieve the first

two of the above objects, viz., those of teaching the utility of hands and imparting the fact-finding spirit and power of investigation than "education through museums."

Museum Education, as the author says, is a somewhat novel idea, especially, in our country. It is the diffusion of general knowledge by means of what are called *Educational Museums*, as distinguished from the existing *Public Museums*. The *Public Museums* are generally the storehouses of objects and relics whose *public* utility and educative value are very small. They have been founded with a different object. An educational museum, properly so called, on the other hand, should contain exhibits covering all departments of life, with special emphasis on the modern arts and sciences, and important industries and discoveries—all arranged and classified in such a manner that they may be examined at close quarters, and actually handled under the supervision and guidance of a competent guide or instructor.

So far as educational utility is concerned the old and antiquated types of Public Museums have not done much. We can establish Educational Museums in their places. The older type of Public Museums does little more than provide employment to a few and instructions almost to none. Their chief object is the mere display of their stocks, and not imparting knowledge to the visitors. Consequently they do not seek the co-operation of educational institutions, and nor do they consult them with regard to their requirements. And they measure their utility only by the number of their visitors; they take pride in their collection and preservation of arts, crafts, and relics of antiquity, animals, geological, ethnological specimens, and so on. In making these.

collections, they ignore the claims of the subjects of vital importance such as Eugenics, Maternity, Childwelfare, Dietary, Temperance, Health and Hygiene, etc.

The book under review is an appeal to all educationists, specially the heads of institutions for the establishment of *Educational Museums* at all important centres of education, as integral parts of schools and colleges. The author has given concrete suggestions based on practical experience for the achievement of the ideal. There is no doubt that the scheme, if put into effect, will broaden the general outlook of our students as well as of other visitors to such museums, and will counteract the evils of *bookish habits* which are so common with our pupils. Education should be thoroughly *practical* and should concern itself with things of every-day life, such as health, diet, industries and, in general, the world around us.

Another vital problem which engages the attention of our countrymen at the present moment is the spreading of education amongst the *illiterate masses*. And in the pages of this book, Mr. Basak has hinted how an all-round education may be brought within the reach of the masses by means of such educational museums very effectively and at the same time economically. We know very well the modern psychological theory that education can very speedily be imparted by means of *visible* representation. And the writer has described how such Museums can offer ample scope for the training of the visual, tactual and other sensations on the part of the scholars.

The Subject is dealt with in a scientific manner and the classification of exhibits for the Museum is exhaustive and based on the latest findings of

Educational Psychology. Such educational museums when materialised, will be a powerful means of imparting education in the quickest possible time and in the most interesting manner. The general get-up and treatment of the book are satisfactory. On the whole it will be instructive and useful both to teachers and to laymen. And all those who are specially interested in the aids to teaching will do well to go through the pages of this valuable publication by one experienced in the art.

K. K. MOOKERJEE,

Calcutta Review, February 1939.
Published by the University of Calcutta.

No. 118.

As the Empire Secretary of the Museums Association and a former Director-General of the Archaeological Survey of India, observed, 'In not a single Indian museum, so far as we are aware, is there that intimate link between schools and museums which is such an important feature of the museum service of the United States of America and several European countries. Museums in India have in the main adopted a purely passive attitude to education.'

The book under review puts forward an impassioned plea for the establishment of educational museums at all the important centres of education. The title, *Hints on Museum Education* is most appropriate for, in the words of the author, it is no 'elaborate treatise' on museum planning. Nevertheless the writer has outlined a fairly comprehensive scheme of educational museums.

The book is divided into numerous chapters describing the necessary contents of an educational

museum, such as domestic science, health, arts and crafts, mechanics, and inventions, geography and history, geology and mineralogy, astronomy and archaeology, to mention only a few. The author is at great pains to dispel the general notion about museums. The museums for which the author stands are no mere *ajayab-ghars*; they are rather *Jnan-bhandars*.

Except for digressions and repetitions at places, the book is written in a simple and elegant style and the scheme outlined is essentially practical and worthy of consideration by the chief educational institutions of the country. What invests the book with authority is the fact that the author himself is the founder and curator of a museum modelled on the type he advocates.

Leader (of Allahabad),
January 31, 1939

No. 119.

Mr. T.K. Peters, Director of the Archives, of Oglethorpe University, Georgia, U.S.A., in which discoveries of the first half of the 20th century will be preserved in a sealed stainless-iron building to be opened after 6000 years, have asked me to send him a copy of my book "*Hints on Museum Education*" for preservation in the Crypt. In his letter to me dated March 17, 1939 he writes about the book, "it is indeed interesting, especially to me as I teach visual Education here at Oglethorpe".

APPENDIX

Letter to the Vice-Chancellor of the Calcutta University

363, Upper Chitpore Road,
Calcutta, 20th February, 1939.

To

The Hon'ble Vice-Chancellor,
Calcutta University.

Re. *Educational Museum.*

Dear Sir,

I have the honor to acknowledge receipt of your reply no. Misc. 5003/25 dated the 8th January, 1939 to my letter of the 2nd Dec. 1938, through your Registrar.

2. With regard to your reply I have to state that as the object, nature, scope, principle and classification of an Educational Museum are different from those of a Commercial Museum, especially of India; and as my small collections on the subject of commerce are few in the initial stage of the Educational Museum, it would not be worthwhile to present them in the bigger collection of your commercial museum.

3. It is a matter of great regret that although I have been making some efforts in the last 4 or 5 years for starting an Educational Museum at Calcutta with an expectation that the University would help me in my attempt, I now find to my utter surprise that I have failed in getting its sympathy and co-operation, notwithstanding the fact that the former Vice-Chancellor Mr. S. P. Mukherjee approved my plan in his letter to me dated 9th April 1934

and about one dozen Professors of the University have supported my view; and more than 100 leading men, educationists and papers of India have approved my scheme. The reviews of my books on Museum and a Declaration in support of such museums have been published in three books, (1) "Educational Museums at the Educational Centres of India," (2) "Education through Museum" and (3) "Necessity of Educational Museums." (a pamphlet of 60 pages;—copies of which were sent to you and to some Professors of your University.) I can secure favourable reviews of the book "*Hints on Museum Education*" from several Professors, Readers and Demonstrators of your University, if I can approach them in my present old age of 80 years. Similarly, I can collect favourable reviews from 500 men of education throughout India. Reviews of the Curator-in-Chief of the famous *Children's Museum* of New York, U.S.A., and the Director of Free Public Museums of Liverpool, printed on pages 15 and 19 of the last book, are worth perusal. The Director of Archives, Oglethorpe University of Georgia, U.S.A., has requested me to send a copy of my "*Hints on Museum Education*" for preserving it in the *Archives* intended to be opened 6000 years hence. The Provincial Directors of Public Instruction are precluded from reviewing my books according to an implied rule of the Text-book Committees. I think such is the case with the Members and Ministers of Education of different Provinces.

4. The Calcutta University has rectified its mistake of 75 years by recently introducing elementary science in the Matric Schools. So I even now entertain some hope that the Universities of India would rectify their long-standing mistake by starting Educational Museums for schools, colleges and universities situated at least in the big cities. They will prove useful to the Arts-course students also. Even the students

of science require their aid to acquire a general knowledge of different sciences,—for example, a student of chemistry might remove his ignorance regarding mechanics, mechanism of ordinary implements and machines, uses of geological, botanical and animal products, and so on. There is no need of dilating upon this subject; because by a little thinking, a sensible educated man can easily draw right deductions from my above proposition. I still entertain some hope that in course of next 5 years, all the Universities will deeply think over the matter and start Educational Museums, and thereby remove a long-felt want in the education-system of the 20th century. Without Museum Education, ignorance of the students on important subjects cannot be driven away.

5. By deeply thinking over our present situation we shall have to come to the conclusion that we cannot progress without the use of tools and machines, made in foreign countries or India. Except certain classes of backward people, a large percentage of the population shall have to travel by railways, steamers and automobiles; shall have to use tools, implements and machines in carpentry, foundry, textiles, printing, photography, turning, dairy, spinning, agriculture and in a number of arts and manufactures; household-fittings, building materials, pumps, tubewells, medical and sanitary appliances; rubber, celluloid, glass, porcelain articles, etc. Therefore, it follows that their samples should be gathered in a Museum and their uses to be explained.

6. I earnestly request you to be kind enough to move the Senate and the Syndicate for the establishment of an Educational Museum by forming a Museum Committee under your presidency consisting of some members from the university, and others from the Principals of Colleges of Calcutta, and retired or

private educationists, and locate it in a suitable building in an educational quarter of the town, till the erection of a new building for the purpose. A full estimate of moderate costs and expected contributions has been published in my book "Necessity of Educational Museums." The University, Colleges and Schools of Calcutta; the Calcutta-Corporation; Directors of Public Instruction, Health and Industry, should contribute for the purpose. Until a new building be erected, I hope you will be pleased to provide one or two rooms or verandahs of the University College of Science, 92, Upper Circular Road; or elsewhere as you think proper, for necessary collections.

7. Let me clear up some vague notions about the exhibits of a Commercial Museum. An Educational Museum should collect samples of articles which are also necessary for a Commercial Museum; because the scope of the former is far more extensive than that of the latter. People generally entertain wrong ideas about exhibits of a Commercial Museum started for imparting education. They think that only *swadeshi* articles should be kept in it. According to my views this idea is wrong. The true idea of Commercial Museum should be two-fold, that is, it should contain not only samples of products and manufactures of India, but also of foreign countries. It is a short-sighted policy to exclude all foreign articles, if they are interesting and useful. Without seeing or examining them, the Indians cannot produce or manufacture those things, or improve their quality. The spirit of imitation and emulation should certainly be encouraged. As we are seeing and using hundreds of foreign things, there is no harm in keeping them in the museum by marking them as *foreign* to distinguish them from *Indian* things. On certain occasions, some articles of different countries should be placed side by

side for comparison. We should clearly understand that the object of a Swadeshi Exhibition, either for sale or show, is quite different from the object of a Commercial Museum founded for the purpose of education. The progress of modern civilisation of India will be hampered if foreign articles are intentionally excluded. The exhibits of the Commercial Museum of your University are mostly Indian. By the use of foreign articles for more than half-a-century we have become accustomed to them, so much so that our existence has become dependent on them. Therefore it is our duty to teach the students the uses of the foreign articles also, and the methods of their manufactures by showing them in a Museum or big manufactories.

S. Educational Museum is the foremost, simplest, and most important step in disseminating useful knowledge in India. Gradually other steps could be taken for spreading technical knowledge which is necessary in technical industries. This is one of the simplest methods of reforming the present defective educational system of India, whether the universities at present admit it or not. But I believe they will do so as early as possible, when their predilection for museums of antiquity will disappear.

I have the honor to be, etc.

J. C. BASAK.

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 TO THE EDITORS OF JOURNALS AND NEWSPAPERS

Sirs,

I respectfully request you will be pleased to quote copiously from this book in your papers with the object of showing the importance and utility of Museum Education, to the heads of Education Departments of Government, Universities, Colleges and Schools of India and the educated and intelligent public.

P.O. Dayalbagh (Agra)

Yours truly

*Dated 1st June 1939.*

J. C. Basak

## Introduction to my Publications

People of India, even the educated Indians, generally do not know how to cleanse the body properly: how to protect it from heat and cold, filth and microbes: what are the benefits of cleanliness: and what are the special hygienic rules for the **Care of the Eyes, Ear, Nose, Teeth and Mouth, Skin; Right Breathing, Diet and Digestion.** As there are very few cheap popular books on these subjects fit for the Indians, I have felt the necessity of publishing such books for the education of the Indian people, especially the student community.

The Heads of Schools and Colleges are requested to peruse these books: and if they find them useful, they should induce the students to study them and improve their health. All educated persons of India should consider that it is their foremost duty to study popular books on Physiology, Health and Hygiene and follow the laws given therein. All books on other subjects are of secondary importance, because preservation of health should be the prime object of life.

In my books on Education I have pointed out principal defects in the education-system of India: and have proved the utility and importance of Education through Museum and noted down certain methods of imparting such education.

—Pabi—

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## Some Extracts from the Reviews

"I think the paper (Care of the Teeth and Mouth) is very well written."—*R. Ahmad, D. D. S., Principal, Calcutta Dental College.*

"I recommend this little book about teeth to all who possess them."—*Calcutta Municipal Gazette.*

Care of the Nose and Care of the Ear.

"They are unique in character and I hope will be highly appreciated by the public."

—*Dr. S. Mitter, M. B.*

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—*Deputy Director of Public Health, U. P.*

"Care of the Teeth is a wonderful little book."

—*S. N. Banerjee, Bar-at-law.*

"Your little treatises are indeed very useful and should be read by the laymen widely."

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Diet of the Indians.—The youngsters should read, re-read and carefully ponder over the valuable suggestions."

—*Bansari Lal Sarkar, Advocate, High Court*.

"Your books are not only very readable, but useful. They should be introduced into every institution in Bengal, nay in India."

—*Capt. J. N. Banerjee, Bar-at-law*.

Dr. Tagore has read the books with much interest and pleasure. Dr. Tagore considers your books to be of great value for the spread of correct ideas on health and hygiene and hopes that they will receive the publicity which they certainly deserve."

—*Secretary to Dr. Rabindra Nath Tagore*.

"Diet of the Indians is an excellent book and both teachers and boys will find it profitable if they peruse it." —*Inspector of Schools, Patna Division*.

As it will take about 50 pages to publish all the Reviews, I mention only names of the Journals which have favourably reviewed most of the books:—*Longevity, Medical Practitioner, Burmah Medical Times, Indian Review, Antiseptic, Saraswati, Bombay Chronicle, Medical Comrade, Industry, Education, Modern Review, Federated India, Medical Digest, Venkateswar Samachar*, etc.

Directors of public Instruction of Madras, N.-W. F. P., Punjab, Assam and C. P. have approved most of the books,

